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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/779,323 | 02/13/2004 | Toru Takagi | 4641-67740-01 | 5254 |

24197 7590 07/20/2005

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| EXAMINER |
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EL SHAMMAA, MARY A

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| ART UNIT | PAPER NUMBER |
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2883

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/779,323

Applicant(s)

TAKAGI ET AL.

Examiner

Mary A. El-Shammaa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagai et al. (US 6,259,094 B1 – “Nagai”).

Regarding claims 1, 5, 6, and 8, Nagai discloses in Fig. 11 an electron microscope and an method for performing electron microscopy comprising an irradiation-optical system (11) situated and configured to irradiate a two-dimensional region of a surface of a specimen (16) with charged particles produced by a charged particle source (12) to cause emission of imaging electrons from the region on the specimen, an imaging-electron detector (22) having a detection surface; and an imaging electron optical system (17a) situated and configured to direct the imaging electrons onto the detection surface, wherein the irradiation-optical system (11) controls the charged particles such that changes in potential due to charging by the charged particles in the region of the specimen surface are within a range in which an image can be obtained (col. 2, lines 25-64; col. 3, lines 4-57; col. 4, lines 40-65; co. 5, lines 27-52; col. 6, lines 24-36; col. 7, lines 25-40; col. 8, lines 53-67; col. 9, lines 1-49).

Regarding claims 2 and 7, Nagai discloses the imaging electron-optical system being configured such that each of multiple regions on the specimen surface is irradiated so as to acquire a respective change of surface potential that is greater than a respective minimum change of surface potential needed to produce a viewable image and a respective maximum change of

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surface potential beyond which a viewable image cannot be obtained (col. 7, line 65 through col. 8, line 67; col. 9, lines 1-30).

Regarding claims 3 and 4, Nagai discloses a cathode lens (18) situated between a Wien filter (34) and the specimen (16), the cathode lens being configured to decelerate the beam by applying a retarding voltage to the beam (col. 2, lines 59-64; col. 6, lines 24-36; col. 7, lines 25-40; col. 9, lines 45-66).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,365,897 B1, US 6,344,750 B1, US 6,232,787 B1, and US 6,011,262 A, all of which pertain to electron microscopes and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary A. El-Shammaa whose telephone number is 571.272.2469. The examiner can normally be reached on M-F (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571.272.2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAE
25 June 2005



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800